

Developments in Business Simulation & Experiential Exercises, Volume 15, 1988

JOG YOUR RIGHT BRAIN: AN EXERCISE FOR THE CLASSROOM AND FOR RESEARCH

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ABSTRACT

Through the projective differential procedure, participants' attention is directed to some of the ways in which the activity of their so-called "right-brains" enters into consciousness. Gaining an awareness of these processes is a new and valuable experience for many persons. The session consists of a tour through nonverbal reactions to a small set of topics which usually includes an important, real-life, project having relevance for each participant. The information generated often provides fresh insights into the topics themselves, as well as new appreciations of personal reactions and orientations towards them.

BACKGROUND FOR THE EXERCISE

By "right-brained", we are referring to insight, intuition and creativity. These are holistic processes that are neglected in most of our education. Much of society is geared to emphasize and reward the analytical, verbal and logical mental performance that is commonly attributed to the "left brain" (see, for example, Agor, 1984; Mintzberg, 1975; Springer and Deutsch, 1985; Taggart and Robey, 1981; Williams, 1983). Obviously, both left and right hemispheres are continuously involved in all normal mentation. nevertheless, the "silent partner," the right brain, and its contribution to minute by minute experience is given a back seat, so to speak. We tend to ignore, down-play and Stop paying attention to it, even though it is doing it's job! We sometimes even feel reluctant to admit that our stand or action on some contested issue is based upon a "gut feel" that we have somehow learned to trust (Agor, 1935; Feinberg and Levenstein, 1982).

The Jog Your right Brain exercise utilizes the projective differential response as its unique centerpiece. It is similar to a semantic differential response, except that subjects choose which of two abstract visual images is more like a topic, rather than which of two adjectives is more like it. A topic is defined as the object (usually denoted by 3 word or phrase) that is being rated on a semantic or projective differential instrument. The projective differential task requires that subjects make a simple forced choice rather than indicate where the topic falls on a continuum, such as the semantic differential's seven interval scale. A projective differential item consists of a pairing of abstract visual images projected onto a screen at the front of the testing room. The Jog Your Right Brain exercise consists of ten pairs of images. A simplified projective differential exercise consisting of one items and lot involving 35mm slides, Tap Your Right Brain, can be found in Raynolds and Raynolds, 1986. Numerical data from projective differential choices can be analyzed in ways similar to semantic differential data. Research has shown that most respondents readily flake such seemingly nonrational choices.

Furthermore, it is common for 60-80% of subjects to make the sane choices. This is the projective differential response

phenomenon (McInnis, 1991; Raynolds, Sakamoto and Saxe, 1981; Sakamoto, 1980).

It is hypothesized that the projective differential response is predominantly "right-brained," because it is a pictorial, nonverbal, analogical and holistic choice that occurs in less than one second. Because of these qualities, the response is evoked without verbal filtering, thus avoiding some of the effects of response biases due to real or imagined pressures toward social desirability or cognitive consistency on the part of respondents. When verbal (left hemisphere) and nonverbal (right hemisphere) data recombined, predictions of behavioral intentions are significantly improved. Data from the two hemispheres societies disagree. This indicates that respondents are either undecided or under internal stress or conflict with respect to the topics (Raynolds, Sakamoto and Saxe, 1931; Raynolds, Saxe and Sakamoto, 1933; Sakamoto, 1933).

The procedure has been refined over a number of programs and presentations (Coffey, Athos and Raynolds, 1975; Raynolds, 1972a, 1972b, 1933; Raynolds and Raynolds, 1984a, 1984b, 1984c, 1985a, 1985b, 1985c, 1997). After a brief introduction to right-brained processes and the projective differential response phenomenon, participants generate both quantitative and qualitative projective differential data (nonverbal choices and verbal associations). The procedure itself tends to trigger creative and intuitive processes which often take some time, perhaps several days, to reach culmination. During a Jog session, participants are taken on an experiential journey through some of the linkages between their nonverbal (right brain) and verbal (left brain) perceptions of the topics employed. This "jogging" highlights the two channel nature of all complex mental functioning and constitutes a major learning that participants can take home with them.

ADMINISTRATION AND SCORING

The Jog Your Right Brain Exercise consists of several steps which are outlined in Table 1. In Step #1, the projective differential procedure is administered on four topics. The first two topics may be selected to meet the specific requirements of a particular class, workshop or research setting. We have used individual personal development projects and semester-long groups in 03 and management classes. In these cases, the first Jog topic was MY PERSONAL PROJECT and the second was MY GROUP. Other topics, used in other settings, have included CREATIVITY, STRESS, and MANAGEMENT, as dell as various ORGANIZATIONS, UNITS, PERSONS, PRODUCTS, SCHOOLS, INSTRUCTORS or QUALITIES (such as EFFICIENT, STRONG, HEALTHY...) The third and fourth topics are usually MYSELF (THE WAY I REALLY AM) and THE IMAGE I PREFER (or LIKE BETTER) These last two topics are "anchor topics" and used so that Identification, self-esteem and

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attitude scores can be computed later. The instructor may use other anchors if he/she prefers.

A special stimulus set composed of five visual abstract images, developed by the authors for the Jog exercises, is employed. They were taken from Raynolds and Raynolds, 1932. Each of the ten possible combinations of the five images taken two-at-a-time is projected onto a screen at the front of the classroom for about one second, in the same order, for all four topics. About three seconds is provided between each of the pairings for participants to mark their choices on the response form, and fifteen seconds is provided before each of the four topics, so that participants can get the topic to be rated squarely in mind before starting on it. A brief "warmup" is given before the first topic so that participants can get the hang of the procedure.

projective differential choices are indicated by circling the appropriate letters on the response form (see Part ONE in Figure 1). For example, if the respondent's choice on the first slide appears on his/her left hand side of the screen, "a" is circled, and if it appeared on the opposite side of the screen, "b" would be circled. Incidentally, the left or right side of the screen has flu association with left or right brain. The five images are lettered "a" through "e". Actual administration on the projective differential procedure on the four topics takes about five minutes.

Participants are then asked to discuss their experiences and feelings about making the choices. They are asked to try to remember what they experienced, so as to get a better handle on some of the ways that their own, individual, R-mode processes operate. Here are some examples of what participants said: "One image seemed larger" or "brighter," "We seemed to jump out," "My eyes went to one of the images," or "It just felt right." This sharing tends to have a releasing effect, and it provides participants with glimpses into their own and others' nonverbal and intuitive mental processes.

For Step #2, each of the five images is shown alone on the screen for about one minute. Participants are instructed to give each image a name (and/or to describe ***** briefly) as if they had found it hanging on a wall someplace as a piece of art. Their responses are entered in Part FOUR on the response form. The reason for jumping to Part FOUR on the form is two-fold: Number 1: the form is laid out to simplify the later scoring of Part ONE responses. Number 2: the verbal responses might become contaminated or biased by the scores if they had been computed first. Participants are again asked to discuss and compare their responses, this time with the other members of the class, their groups, or the workshop session. This discussion period will often also be useful in pure research settings.

Step 13 of the exercise consists of scoring the choices made in the first Step. The scoring is recorded in Parts 1110 and THREE of the response form, and provides the basis for a quantitative interpretation of each individual's results from Part ONE. The Part TWO scoring consists of counting the number of times each of the five images is selected for each of the four topics. This allows every participant to determine which image(s) seemed most like and least like the topics he/she rated.

Part THREE scoring is a bit more complicated. It consists of counting the number of times in Part ONE student's PERSONAL PROJECT received negative nonverbal attitude and identification scores despite the fact that the project was being undertaken in earnest and without conscious awareness of internal resistance. This student also chose image "c" most often as being like the project. The negative attitude toward the project was supported by the name "ugly bug" given to image "c". This was unequivocally a negative name given to the image which epitomized the personal project. Moreover, plate "c" was also chosen the fewest times as being like MYSELF or the IMAGE I PREFER (or LIKE BETTER), which additionally supported both the negative attitude and identification hypotheses. Further exploration with the student disclosed the project to be an admirable but difficult one, and that he was experiencing failures rather than progress with it. We suggest to participants that unexpectedly negative nonverbal attitude and/or identification scores which are confirmed in this second stage of interpretation, may reflect the presence of legitimate but unrealized obstacles which can lead to constructive outcomes when further examined and dealt with.

Many other participants reported that the nonverbal attitude and identification scores, along with the second stage confirmations, came as no surprise to them. Sometimes, the scores actually strengthened confidence in their feelings toward the topics.

DISCUSSION MID CONCLUSION

The Jog Your Right Brain exercise provides participants with a meaningful experience that increases self-awareness as well as increases insights into the topics which are employed. Further, the exercise generates quantitative and qualitative data arising from nonverbal responses that researchers can employ in a variety of research contexts. For example, projective differential pairings were constructed for testing in Japan to determine if the projective differential response phenomenon was present in another culture. Results of this study produced cross-cultural attitude scales with alpha reliabilities of .7 to .3 with 4 to 12 items. Moreover, the correspondence between American and Japanese responses was high, producing a Spearman RHO of .3 to .9 on the topics tested. Finally, results from conventional verbal measures can be compared directly with results from nonverbal projective differential measures.

REFERENCES

- Agor, Weston, 9. (1935). The Logic of Intuitive Decision Making: a Research-Based Approach for Top Management. New York: Quorum Books.
- Agor, Weston 1. (1134). Intuitive Management: Integrating Left and Right Brain Management Skills, Englewood Cliffs, N.J.: Prentice-Hall.

¹ For information regarding the availability of "Jog" images for teaching or research purposes, contact the senior author at the College of Business Administration, Box 15066, Northern Arizona University, Flagstaff, Arizona 86011.

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- Coffey, Robert E., Anthony 3. Athoz and Peter A. Raynolds (1975), Behavior in Organizations: A Multidimensional View, (2nd edition) , Englewood Cliffs, N.J.: Prentice-Hall, p. 65.
- Feinberg Mortimer R. and Aaron Levenstein (1982), "How Do You Know When to Rely on Your Intuition?," Wall Street Journal, June 21, p. 16.
- McInnis, Noel (1981, July 13), "Rorschach Revised; New Window to the Unconscious?," Brain/Mind Bulletin, 6, 12.
- Mintzberg, Henry (1975), "Planning on the Left Side and Managing on the Right Side," Harvard Business Review, July-August, 49-58.
- Raynolds, Peter A. (1983). "Meet your Right Brain," presentation given at Mountain-plains Management Conference, Grand Canyon, Arizona, November.
- Raynolds, Peter A. (1972a) , "Creativity Training and Managerial Education for Coping with Turbulent Organizational Environments," Proceedings of the 32nd Annual Meeting of the Academy of Management; Minneapolis, Minnesota, August.
- Raynolds, Peter A. (1972b) , "Cognitive Style, Self Concept, and Effective Creativity Training." Paper presented at the 30th Annual Convention of the American Psychological Association; Honolulu, Hawaii, September.
- Raynolds, Peter A. and Gennie H. Raynolds (1987) "Jog Your Right grain: A Classroom Exercise that also Provides Research Data," a workshop presented at Mountain-Plains Management Conference, Cedar City, Utah, October.
- Raynolds, Peter A. and Gennie H. Raynolds (1985), "Tap Your Right Brain: A Multipurpose Classroom Exercise," in Dorothy M. Hai, Organizational Behavior: Experiences and Cases, St. Paul: West Publishing Co.
- Raynolds, Peter A. and Gennie H. Raynolds (1985a) "Jog Your Right Brain: An Experiential Workshop for Teachers, Managers and Administrators." presented at Organizational Behavior Teacher's Conference; Charlottesville, Virginia, June.
- Raynolds, Peter A. and Gennie H. Raynolds (1985b), "Jog Your Right Brain: An Introductory Workshop for Managers and Teachers," presented at the Western Academy of Management Conference, San Diego, California, March.
- Raynolds, Peter A. and Gennie H. Raynolds (1985c) "Stress Awareness and Management," a Workshop presented for the faculty and staff of the School of Health Professionals, Northern Arizona University, January.
- Raynolds, Peter A. and Gennie H. Raynolds (1984a), "Meet Your Right Brain An Experiential Introduction," workshop given at Organizational Behavior Teacher's Conference, Boise, Idaho, May.
- Raynolds, Peter A. and Gennie H. Raynolds (1984b) "Development of the 'Right-Brained' Executive Process," presentation given at Mountain-Plains Management Conference; Durango, Colorado, October.
- Raynolds, Peter A. and Gennie H. Raynolds (1984c) "The RC (Resistance to Change) Factor," a Workshop presented for the Del E Webb Recreational Properties Management group, Flagstaff, AZ, November.
- Raynolds, Peter A. and Gennie U. Raynolds (1982), Projective Differential Images, Flagstaff: Projective Awareness Research Center.
- Raynolds, Peter A., Shirot Sakamoto and Robert Saxe (1981), "Consistent Responses by Groups of Subjects to Projective Differential Items," Perceptual and Motor Skills, 53, 635-644.
- Raynolds, Peter A., Robert Saxe and Shirot Sakamoto (1983) "Towards Projective Differential Scales," Working Paper Series, College of Business Administration, Northern Arizona University, 83-1.
- Sakamoto, Shirot (1980) , "Contingency Severity and Individual Performance in a Probabilistic Case Setting," Human Relations, 33, 10, 687-709.
- Springer, Sally P. and George Deutsch (1985), Left Brain, Right Brain (Revised edition), San Francisco; W.H. Freeman & Co.
- Taggart, William and Daniel Robey (1981), "Minds and Managers: On the Dual Nature of Human Information Processing and Management," The Academy of Management Review, 6, 2, 187-195.
- Williams, Linda Verlee (1983), Teaching for the Two-Sided Mind, Englewood Cliffs, N.J.: Prentice-Hall

TABLE JOG YOUR RIGHT BRAIN EXERCISE STEPS

Step #1: Administer the projective differential technique on four topics. The first two topics may be designed to fit the particular situation, while the last two topics are usually MYSELF (THE WAY I REALLY AM) and THE IMAGE I PREFER (or LIKE BETTER). Participants enter their choices of one image from each of the ten pairs for each Topic in Part ONE on the Projective Awareness Response Form.

Step #2: Name or briefly describe the five images (one at a time). Participants enter their responses in the five spaces provided in Part FOUR on the Response Form.

Step #3: Scoring: First, participants count (tally) the number of times each of the five images was chosen for each of the four Topics and enter the scores in Part TO on the Response Form. Next they count the number of times (out of the ten slides in part ONE that the same image was chosen for Topics I & II (Same Choice Score) and enter the score on the line marked "I - II" in Part THREE on the Response Form. Finally they repeat the procedure for each of the other combinations of Topics ("I - III", "I - IV"). It is helpful to demonstrate both of these scoring methods on the blackboard or on an overhead.

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TABLE 1 (continued)

Step #4: Interpretation: First Stage consists of tentatively interpreting attitude, identification and self-esteem measures from the Same Choice Scores recorded in part THREE of the Response Form. For example, if Topic I was MY PERSONAL PROJECT and Topic H was MY GROUP:

Attitude Scores:

Toward MY PERSONAL PROJECT = Same Choice Score (IV-I)
Toward MY GROUP = Same Choice Score (IV-U)

Identification Scores:

With MY PERSONAL PROJECT = Same Choice Score (UI-I)
with MY GROUP = Same Choice Score (III-U)

Self-Esteem Score Same Choice Score (III-IV)

A score of '5' is neutral. Scores over '5' are positive and scores under '5' are negative. Scores closer to "0" or to "10" indicate greater extremity.

The Second Stage consists of testing these tentative hypotheses by finding the plate(s) which epitomized Topics I, II and III (as recorded in Part NO of the Response Form) and examining the names given to these Plates (in Part FOUR of the Response Form).

FIGURE 1 PROJECTIVE AWARENESS RESPONSE FORM

Part ONE: Circle the plate from each slide which seems somehow to be more like the topic. Concentrate on the topic before making each choice and try to give your first reaction without thinking about it. There are no "correct" or "incorrect" answers.

TOPIC I		TOPIC II		TOPIC III		TOPIC IV	
Left choice	Right choice	Left choice	Right choice	Left choice	Right choice	Left choice	Right choice
a - 1 - b		a - 1 - b		a - 1 - b		a - 1 - b	
c - 2 - d		c - 2 - d		c - 2 - d		c - 2 - d	
a - 3 - e		a - 3 - e		a - 3 - e		a - 3 - e	
b - 4 - d		b - 4 - d		b - 4 - d		b - 4 - d	
e - 5 - c		e - 5 - c		e - 5 - c		e - 5 - c	
d - 6 - a		d - 6 - a		d - 6 - a		d - 6 - a	
e - 7 - b		e - 7 - b		e - 7 - b		e - 7 - b	
c - 8 - a		c - 8 - a		c - 8 - a		c - 8 - a	
d - 9 - e		d - 9 - e		d - 9 - e		d - 9 - e	
b - 10 - c		b - 10 - c		b - 10 - c		b - 10 - c	

Part TWO:	Tally score	Tally score	Tally score	Tally score
Count the number of times you circled each letter.	a _____	a _____	a _____	a _____
	b _____	b _____	b _____	b _____
	c _____	c _____	c _____	c _____
	d _____	d _____	d _____	d _____
	e _____	e _____	e _____	e _____
	Total = 10	Total = 10	Total = 10	Total = 10

Part THREE:

Refer to Part ONE: count the number of times you made the same choice for pairs of topics (the minimum possible is 0 and the maximum is 10 for each two topics).

Same choice scores:

I & II _____
I & III _____
I & IV _____
II & III _____
II & IV _____
III & IV _____

Part FOUR: Name or describe each plate.

a _____
b _____
c _____
d _____
e _____